December 8, 2006

Mail Stop 6010

Euan S. Thomson, Ph.D.
Chief Executive Officer
Accuray Incorporated
1310 Chesapeake Terrace
Sunnyvale California 94089

Re: Accuray Incorporated
Registration Statement on Form S-1
Filed November 13, 2006
File No. 333-138662

Dear Dr. Thomson:

We have the following comments to your filing. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. It is unclear from the front cover page and signature page of your registration statement which entity has filed the registration statement and is registering the securities. Your disclosure on page II-2, indicating that "[p]rior to completion of the offering, the Registrant will reincorporate in Delaware," suggests that the California corporation is the registrant but that the Delaware corporation will be issuing the securities. Please note that the company that will be issuing the securities needs to file the registration statement. See Securities Act Rule 405 for the definition of "registrant." Please indicate whether the reincorporation will occur prior to effectiveness and revise your registration statement to clearly identify the entity that is both registering and issuing the securities registered in your Form S-1.

2. Please update information you have provided throughout your prospectus as of June 30, 2006 to a more recent practicable date.

Prospectus Cover Page

3. Please confirm that any preliminary prospectus you circulate will include all non-Rule 430A information. This includes the price range and related information based on a *bona fide* estimate of the public offering within that range. Also note that we may have additional comments after you include this information.

Graphics

4. If you intend to add graphics to your prospectus please provide us with copies so that we may review them.

Prospectus Summary

5. The disclosure in the summary should be a balanced presentation of your business. Please balance the description of your competitive strengths with equally prominent disclosure of the challenges you face and the risks and limitations that could harm your business or inhibit your strategic plans. For example, but without limitation, balance your discussion of your product benefits with a discussion of the risks your business faces from:

    - the expected 25% decrease in the Medicare payment rate for procedures utilizing your product for the 2007 calendar year;
    - the lack of long-term clinical data supporting the efficacy of your product;
    - your reliance on single source suppliers;
    - the length and variability of your sales cycle;
    - regulatory risks resulting from your frequent product modifications and upgrades; and
    - the significance to your business of international sales and your dependence on third-party distributors.

6. Please provide us independent, objective support for the statements regarding your leadership and market standing. For example, you indicate in the summary and in other parts of your prospectus that your products procedure “avoids many of the potential risks and complications that are associated with other treatment options and is more cost effective that traditional surgery” and that you have “a well-established track record of developing and delivering state-of-the-art upgrades.”

7. Please disclose in your prospectus summary when your product received FDA approval and when it received approval for indications outside the brain.

8. In the forepart of the prospectus, including the summary and the risk factors, please limit the use of technical jargon and terms that may not be familiar to investors, including terms and abbreviations such as "linear accelerator," "image-guidance technology," "rigid frames," "sterotactic frames," gantry-based," "implanted fiducials" and "collimator changer." Where you believe it is essential to use technical terms and abbreviations, please define them when you use them.

The Offering, page 6

9. We note the discussion that the information in the prospectus assumes the exercise of the warrants to purchase 525,000 shares of common stock immediately prior to the closing of the offering. Please tell us the basis for assuming the exercise of these warrants. For example, discuss whether there is there a firm commitment or other agreement for the exercise of these warrants.

Risk Factors, page 9

We must obtain and maintain regulatory approvals…, page 17

10. Please expand your discussion regarding the 12 month suspension of Japanese regulatory approval. For example, explain what it means to have your distributor fail to "coordinate product modifications and obtain necessary regulatory clearances in a timely manner." Confirm that the cause of such suspension has since been resolved to the satisfaction of Japanese regulatory authorities and whether as a result of such suspension you are subject to a probationary period. Also clarify whether this distributor is one of your current major shareholders.

Management's Discussion and Analysis, page 35

11. Please revise the overview to add a balanced, executive-level discussion that identifies the most important themes or other significant matters with which management is concerned primarily in evaluating the company's financial condition and operating results. Discuss material business opportunities, challenges and risks, such as those presented by known material trends and uncertainties, on which the company's executives are most focused, and the actions they are taking in response to them. For example, disclose whether you are seeking to expand or reduce your shared ownership plans, why you chose to restructure your service plans and discontinue your legacy service plans and the effects such restructuring has had on your results of operation. As another example, disclose what consideration, if any, management has given to the challenges, risks and potential effects on your operating results, liquidity and prospects resulting from the downward adjustment to Medicare reimbursement rates by at least 25% for treatments using your technology, as discussed in your risk factor on pages 11 and 12 and on page 66. Discuss whether management has contemplated the effect of such trend on its expectations disclosed on page 39 that

costs of revenue and certain expenses will decrease as a percentage of total net revenue as you realize economies of scale. For further guidance on the content and purpose of the "Overview," see Interpretive Release No. 33-8350 on our website.

Net revenue, page 39

12. Please revise to explain the types of revenue included in each of the four categories disclosed on the face of your statement of operations.

Recent Accounting Pronouncements, page 49

13. We see that you currently use SFAS 123 to account for share-based payment transactions. Please explain why you disclose that the amounts disclosed within your footnotes are not necessarily indicative of the amounts that will be expensed upon the adoption of SFAS 123-R. Note that if you use the fair value method to account for share-based payments, the requirements of paragraph 45(c) of SFAS 123 are not applicable.

Business, page 51

14. We note that you have identified Meditec/Marubeni Corporation as a 10% customer on page F-10. Please disclose in your business section the information required by Item 101(c)(vii) of Regulation S-K.

15. Please provide a brief history of your operations. For example, we note you entered into manufacturing agreements in 1991, yet did not receive approval to sell your product in Japan in 1996 and in the United States until 1999. Explain how you funded your development.

16. Specify the "various indications" for which your product has been approved in Japan, Korea, Taiwan, China and the other countries you refer to in the second paragraph of page 51.

17. Please provide us support for your estimate that over 20,000 patients worldwide have been treated with the CyberKnife system since its commercial introduction. Similarly, provide support for your statements that your customers have increasingly used your product for indications outside the brain and that more than 50% of patients treated with the CyberKnife system in the United States during the three months ended September 30, 2006 were treated for tumors outside the brain.

Competition, page 64

18. Reconcile your disclosure that some manufacturers "claim some radiosurgery capabilities" with disclosure on page 17 that suggests that some of your competitors in fact have such capabilities.

Reimbursement, page 66

19. Revise your disclosure to specify, if known, whether the slight change in reimbursement for physician professional services will increase or decrease reimbursement.

Management, page 75

20. Provide succinct descriptions of each individual's business experience for the last five years, leaving no ambiguities or gaps of time. For example, please address the periods of June to December 2004, August 2002 to March 2003 and July 1998 to March 2001 for Robert McNamara.

Audit Committee, page 77

21. Please tell us how you intend to comply with NASDAQ listing standards Rule 4350(c) requiring a majority of independent members of the board of directors as it appears Mr. Tu, Dr. Thomson and Dr. Adler may not qualify as independent. For example, we note that Mr. Adler has received consulting fees from the company. As another example we note that Mr. Tu is president of President International Development Corporation, of which President (BVI) International Investment Holdings Ltd. is a wholly owned subsidiary and holder of more than 5% of your outstanding voting stock. We note that he is also a director of President Medical Technologies, Co., Ltd., Inc., your distributor for Taiwan, Hong Kong and Macao SAR.

Director Compensation, page 78

22. Please explain the purpose and history of the CyberKnife Society and why you assumed the obligation under its agreement with Dr. Adler.

Certain Relationships and Related Transactions, page 99

23. We note you state you have no outstanding accounts receivable with Meditec. Please clarify whether you have any other current obligations to them and why they are no longer your distributor in Japan. Also please file your May 2003 agreement as an exhibit.

24. Please disclose how much Marubeni Corporation and its affiliates invested in your company and when such investment occurred.

25. Please tell us whether the terms of your agreement with PMTC are similar to agreements with your other distributors. To the extent material, describe any differences from your standard agreements.

26. Please tell us why the payment from PMTC for 2005 was only $21,000.

27. Please disclose how much President (PVI) International Investment Holdings Ltd. and its affiliates invested in your company and when such investment occurred.

28. We note you state that either PMTC or you may terminate the agreement without cause during the first two years of the agreement, yet it appears such time period has passed. Please clarify.

29. Please explain what services and/or products you provided to Stanford University in return for the payments you describe.

Principal and Selling Stockholders, page 102

30. Please identify the individuals with beneficial ownership of the shares held by the entities described in this table.

Shares Eligible for Future Sale, page 112

31. Please quantify what it means to have "substantially" all your stockholders sign lockups.

Change in Accountants, page 118

32. Please file as an exhibit a letter from your former accountant, indicating whether or not they agree with your disclosures regarding the change in accountants.

Financial Statements

33. Please update the financial statements as required by Rule 3-12 of Regulation S-X.

34. Please include a currently dated and signed consent from your independent auditors prior to requesting effectiveness.

Note 2. Summary of Significant Accounting Policies, page F-8

Revenue Recognition, page F-11

35. Please disclose how you are applying the residual method to your products and services. In addition, please tell us how your policy for recognition of upgrade services revenue complies with the requirements of paragraph 38 of SOP 97-2.

Stock-Based Compensation, page F-15

36. Please note that we are deferring any final evaluation of stock compensation until the estimated offering price is specified, and we may have further comments in that regard when you file the amendment containing that information.

37. We refer to your disclosure that you used fair values of common stock between $2.63 and $7.63 in the Black-Scholes option pricing model to determine stock-based compensation. Please provide us with a schedule showing in chronological order, the date of grant, optionee, number of options granted, exercise price and the fair value of the underlying shares of common stock for the options issued within the year preceding the contemplated IPO. Also, provide a similar schedule for issuances of warrants. Please indicate the compensation recorded for each of these issuances and reconcile to the amounts recorded in the financial statements. Tell us the objective evidence and analysis which supports your determination of the fair value at each grant and stock issuance date. Discuss the nature of any events which occurred between the dates the options were granted and the date the registration statement was filed. In addition, provide details of estimated pricing information from the underwriters and indicate whether this was considered in determining estimated fair value of the stock and options issued.

38. For options granted during the twelve months prior to the date of the most recent balance sheet, please disclose the following in the notes to your financial statements:

- For each grant date, the number of options granted, the exercise price, the fair value of your common stock, and the intrinsic value (if any) per option.
- If the valuation specialist was a related party, please disclose that fact.
- Whether the valuation was contemporaneous or retrospective.

Note 3. Property and Equipment, page F-21

39. We reference the disclosure that you retain title to the CyberKnife system under the terms of the shared ownership program. Please tell us whether there are any provisions or options in the agreement for customer to purchase the system. In addition, tell us the nature of the “contingent revenues” referenced in Note 3.

Note 4. Business Combination, page F-21

40. We reference the discussion in Note 4 that the purchase of HES was accounted for in accordance with SFAS 141 but lacked the materiality to be incorporated into the accompanying financial statements for periods prior to the acquisition date.

Please tell what is meant by this statement and clarify the accounting for this acquisition.

41. We note your reference to an independent third-party valuation firm. Revise to include the name of the valuation specialist and provide a written consent under Securities Act Rule 436 as an exhibit to the filing.

Note 8. Commitments and Contingencies, page F-24

Royalty Agreements, page F-25

42. We reference the third sentence in the first paragraph under "Royalty Agreements." Please clarify whether you intended to state that royalty expense is recognized in cost of revenue or deferred *cost of* revenues.

Recent Sales of Unregistered Securities, page II-2

43. Please identify the investors referred to in paragraph 4.

Exhibits

44. Please provide us all required exhibits with your next submission. We note you have not filed your purchase agreement with AS&E. Please also confirm that you have filed all agreements with the single source suppliers referred to on page 15 and elsewhere in your prospectus.

45. We note your reference to an application for confidential treatment. We will review and provide any comments related to your request separately. Comments must be resolved and your application must be complete before we may accelerate the effective date of your registration statement.

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested supplemental information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Kristin Lochhead at (202) 551-3664 or in her absence, Brian Cascio at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at (202) 551-3637 or me at (202) 551-3444 with any other questions.

Sincerely,

Perry Hindin
Special Counsel

cc: Michael W. Hall, Esq.

Laura I. Bushnell, Esq.
Jean-Marc Corredor, Esq.